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Comments:

March 20, 2020

Kooskia Ranger Station

c/o Dan Fabbi

502 Lowry Street,

Kooskia, ID 83539

Sent Via Email and US [auto-markup:Request for Information]Mail[auto-markup end] to: comments-northern-nezperce-moose-creek@usda.gov

Re: Green Horse Project

Dear Mr. Fabbi:

These are comments from Friends of the Clearwater on the Green Horse Project Proposed Action. We renew our request that you notify us by [auto-markup:Request for Information]mail[auto-markup end], pursuant to 40 C.F.R. 1506.6, of any action taken in connection to this project. Additionally, please add katie@friendsoftheclearwater.org and gary@friendsoftheclearwater.org for any email announcements pertaining to this project. We incorporate by reference Harry Jageman's scoping comments of March 5, 2020. That comment letter raises important wildlife, watershed, and vegetation concerns, most of which are not repeated here. We are [auto-markup:Request for Information]mailing[auto-markup end] our attachments today, March 20, 2020.

[comment:10-1(151 Roads Management)]Has the Forest Service looked at simply closing or decommissioning some of the roads it has represented to be hazard roads?[comment end]

#### INTRODUCTION AND QUESTIONS

We also must register a complaint of having so many proposed timber sales from the Nez Perce and Clearwater National Forests coming out at the same time as the forest plan revision [auto-markup:Request for Comment Extension]comment period[auto-markup end]. This stifles [auto-markup:Request for Comment Extension]public comment[auto-markup end] in an effort to radically increase logging levels on these two national forests.

We have cited what we believe is the best science, and are concerned that your proposed action (PA) proposes so much on the basis of authoritative statements describing issues that are unsupported by science. Should you rely on other science, an analysis is necessary, as is an explanation as to why you

are choosing your science over what we have provided.

[comment:10-2(132 Water, Watershed Mgmt)]The logging and burning would occur in the Selway watershed, including Meadow Creek. This is a special place and needs to be treated as such. The impacts to the Selway River need to be considered as well as impacts to Meadow Creek and O'Hara Creek.[comment end]

The PA states that "Glover Creek-Selway River" would be affected by this proposal. However, the map does not reflect this nor does the description of the logging proposals. Further, the date for the Forest plan is listed as 1978 rather than 1987.

## NEPA, NFMA, SCIENTIFICALLY QUESTIONABLE PREMISES

[comment:10-3(220 Laws, Policies, Courts)]According to the legal announcement in the Lewiston Morning Tribune, "The Green Horse project analysis is anticipated to be completed in an environmental assessment" and then "may be subject" to the objection process. Why wouldn't an EA be subject to the objection process? Further, an EIS seems more appropriate for reasons we detail in the following comment. Is the reason the Forest Service has proposed this for an EA because the Regional Office instructed all projects to be EAs in a memo signed last year? EAs cannot be decided politically—this violates the spirit and intent of NEPA.[comment end]

[comment:10-4(220 Laws, Policies, Courts)]Desired conditions are based upon the Forest Plan. They must go through both NEPA and NFMA for compliance. Only the Nez Perce National Forest Plan has gone through NEPA and a decision document. The PA refers to a CBC "partnership" in developing the project, "the desired conditions in the Selway-Middle Fork Clearwater River Subbasin Assessment" and "the goals and objectives of the Idaho County Natural Resources Plan," none of which have gone through the proper NEPA channels. PA at 3. Aside from violating NEPA and NFMA, this backroom deal making is contrary to participatory democracy.[comment end]

The two main statutes that govern the management of our National Forests are the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA). These two intertwined environmental laws form the procedural path the Forest Service must follow when making management decisions that affect National Forest land. One of the most important steps in this path is the requirement of public participation in the management decisions. Public participation in Forest Service management decisions is extremely important because it helps to ensure agency compliance with the applicable environmental laws that control or affect land and resource use and provides for administrative [auto-markup:Threats]appeal[auto-markup end] and [auto-markup:Threats]judicial[auto-markup end] review of these decisions.

Forest Service land-management decision-making is a two-stage process. Briefly, there is the planning stage and the site-specific project stage. The planning stage is the production of Land and Resource Management Plans (LRMP's or Forest Plans), which create a framework for subsequent forest management. Forest Plans are regarded as programmatic documents that establish the management direction of the forest. The second stage is the development of site-specific projects, which determine the specific uses to which the forest will be put to accomplish the goals set forth in the Forest Plan. Site-specific projects are required to comply with the management prescriptions established in the Forest Plan.

Additional documents, which set management direction, under the deceptive auspices of analysis, are not allowed under NEPA and NFMA. [comment:10-5(220 Laws, Policies, Courts)]Such tiering to a non-NEPA document is not consistent with NEPA, NFMA or the Nez Perce National Forest Plan. 40 C.F.R. § 1502.20. It doesn't matter whether those "decisions" were made elsewhere. They must be adopted by the forest plan to be legitimate as desired future conditions.[comment end]

The Forest Service's stated purpose for the project on the website Under Fuel Management is:

Proposal of vegetation management activities to meet the need to improve forest health on stands affected by insect & disease, reduce hazardous fuels, improve public & firefighter safety, and provide

resource outputs to maintain community stability. The Forest Service's stated need for the project in the PA is:

Improve forest health and provide a sustained yield of resource outputs as directed in the Forest Plan by:

- Reducing the extent of insect and disease infection and
- Altering species composition to include more early seral species that are less susceptible to disease infection.

Reduce hazardous fuels and wildfire risk:

- Along roads for public and firefighter safety, including ingress/egress;
- To protect timber resources;
- To maintain recreational opportunities within the area

PA at 4. The paragraphs where these quotes appear do not have any citations to the forest plan or any scientific articles. In fact, [comment:10-6(120.01 Purpose and Need)]the Forest Service neglected to disclose exactly what desired conditions and objectives in the forest plan are at issue. The Nez Perce Forest Plan does not have "desired conditions," so we are unclear as to what you mean by that. The Forest Service, except in the instance of water quality, has it cited "objectives" that make this project necessary, so we don't know what you mean by that, either.[comment end]

[comment:10-7(120 Proposed Action, Decision)]The PA also states, logging would "occur over approximately the next 12 years; landscape burning would follow and would occur over approximately the next 20 years; with subsequent maintenance burning occurring every five to ten years." PA at 4. This is well beyond the useful life of a site-specific NEPA document and is a violation of NEPA.[comment end]

[comment:10-8(111 Public Involvement )]The PA (at 4) abdicates the agency roles by stating, "The Green Horse project was presented at a public meeting held by the Clearwater Basin Collaborative." The CBC is not a transparent group. We've included a couple of webpages to show you that there is no public information about who is currently on this collaborative and whether they attend meetings. In addition to a lack of transparency, the CBC is not authorized to administer our national forests and is not in any way accountable to the public. While the Forest Service held a meeting in Elk City, no others were held in less remote and more populous areas.[comment end]

Additionally, the public notice in the newspaper was the first time our organization was aware of this project. According to your project background, collaboration had already been ongoing by the time this project was released for [auto-markup:Request for Comment Extension]public comment[auto-markup end] under NEPA, so collaborative stakeholders were involved in this project well before the rest of the general public who don't live close to these meetings but, as Americans, still own our national forests. [comment:10-9(111 Public Involvement )]We caution your use of collaboratives to develop projects because science should inform the development of these projects and can often be lost in collaboratives that gather self-interested stakeholders with little or no scientific expertise. For example, you have suggested that you have collaborated with the CBC in developing the "comprehensive restoration strategy" that lead to this project. To the best of our knowledge (because the CBC website has this info hidden) Idaho County is represented through an elected official in the Clearwater Basin Collaborative, yet there is nothing scientific about the county's position to log (Hedberg, "Idaho County to seek voters' 'thoughts and prayers' on wilderness," Lewiston Tribune, Sept. 5, 2018.). The member of the collaborative that doesn't have a resource-harvesting or user-based interest is the Forest Service, and the Forest Service should introduce science that informs projects and examines the impacts of the proposed project under the National Environmental Policy Act. But, scientific independence is the key to scientific credibility (See generally L.F. Ruggerio, Eco Report, *Scientific Independence: A Key to Credibility* pp. 1,2 4 (2007)). Because of the Forest Service's motivations for participating in collaboratives, you undermine your credibility as an independent scientific voice in both the development and analyzation of proposed projects.[comment end]

Research has found that the Forest Service's participation in collaboratives are rooted more in a

motivation to win trust from stakeholders than for any scientific or benefit. Forest Service researchers studied stakeholder and Forest Service motivations for participating in collaborative federal forest governance (Davis et al., *Comparison of USDA Forest Service and Stakeholder Motivations and Experiences in Collaborative Federal Forest Governance in the Western United States, Environmental Management* 60: 908-921 (2017).). The researchers performed a statewide survey of Oregon collaboratives, using this western state because over fifty percent of the land in Oregon is federally owned and at least twenty-five collaboratives exist, (Davis et al., *Comparison of USDA Forest Service and Stakeholder Motivations and Experiences in Collaborative Federal Forest Governance in the Western United States, Environmental Management* 60: 908-921, p. 909 (2017).), which gave the researchers a broad basis to measure motivations for participating in collaboratives. The researchers found that the single primary motive for Forest Service survey respondents to collaborate was to improve trust: "This suggests that [agency respondents] identify the social process of collaboration as important, and value collaborations most of all as a venue for social outcomes." (Davis et al., *Comparison of USDA Forest Service and Stakeholder Motivations and Experiences in Collaborative Federal Forest Governance in the Western United States, Environmental Management* 60: 908-921, pp. 916, 919 (2017).) Because science shows that many Forest Service participants use the collaborative process to improve trust, this motivation undermines scientific independence in both choosing when to develop projects and assessing what kind of impacts those projects will have.

[comment:10-10(142 Timber Mgmt)]The purpose and need to log in light of the hemlock looper is belied by the agency's own statements. For example:

The western hemlock looper creates snags and down wood by severely defoliating and causing the death of all sizes of western hemlock and associated trees in western hemlock stands that are older than 80 years. It also interacts with other agents, such as bark beetles, to cause tree mortality of defoliated trees. By causing topkill in all sizes of trees, *L. fiscellaria lugubrosa* contributes to the formation of unique limb structures and facilitates the colonization of living tree boles by stem decay. During outbreaks, high numbers of larvae pupae, and moths provide abundant forage for many species of birds and invertebrates. Some of the mortality associated with western hemlock looper defoliation may contribute to the formation of canopy gaps, increasing structural diversity.

See [https://apps.fs.usda.gov/r6\\_decaid/views/western\\_hemlock\\_looper.html](https://apps.fs.usda.gov/r6_decaid/views/western_hemlock_looper.html). So, the Forest Service obviously does not want structural diversity or abundant forage for many species of birds and invertebrates. What it apparently does want is to turn the Selway drainage into a tree farm.[comment end]

[comment:10-11(120 Proposed Action, Decision)]We don't see how this logging proposal fits with the Nez Perce National Forest Plan. It is not removing a few trees, rather proposing regeneration (read clearcut or nearly so) logging on 1,513 acres (PA at 4), some of which are within management areas such as MA 21 (moose habitat) (PA at 2 and 3), which doesn't allow such clearcuts.[comment end]

[comment:10-12(122.01 Cumulative Effects Analysis)]The cumulative impacts of this along with other activities including the roadside salvage on the 443 road, Johnson Bar, Red Moose, Iron Mountain, and fire fighting activities—need to be evaluated.[comment end] [comment:10-13(220 Laws, Policies, Courts)] The Selway is a wild and scenic River and the vast majority of this proposal is within watersheds that drain into the Selway. Further, Meadow Creek is an eligible river (wild) in the Nez Perce National Forest plan.[comment end]

## VEGETATION AND FIRE

[comment:10-14(230.03 Forest Health )]The current conditions, according to the PA, are a result of the high-severity wildfires that swept through the region in the early 20th Century. This was before the Forest Service was logging or suppressing fires, so none of the current conditions as the agency has described it can be anything except natural processes. Stand-replacing wildfires on the order of centuries is the fire regime of the Northern Rockies (Westerling et al. 2006. Warmer and Earlier Spring Increase Western U.S. Forest Wildfire Activity. *Science* 313: 940-43; Brunelle and Whitlock 2003. Postglacial fire, vegetation, and climate history in the Clearwater Range, Northern Idaho, USA. *Quaternary Research* 60: 307-318; Odion et al. 2014. Examining Historical and Current Mixed-Severity Fire Regimes in Ponderosa Pine and Mixed-Conifer Forests of Western North America. *PLOS One* 9(2): pp. 1-14, e878852.), so what the agency described, "at risk" is actually nature governing this area.

Yet, the PA at 14 implies that this natural process is somehow unnatural. We would like an explanation on this. Especially since the Forest Service cites Westerling et al. 2006 (Westerling et al. 2006. Warmer and Earlier Spring Increase Western U.S. Forest Wildfire Activity. *Science* 313: 940-43.) in the forest-plan revision process, indicating that the agency has accepted this science in other environmental analyses. This scientific article states that high-severity wildfires are the ecosystem feature of the Northern Rockies, thus fire suppression would have had little impact on the fire regime. Also, Westerling et al. 2006 discusses the potential for more wildfire because of a warming climate. If that is indeed the case and we are to expect more wildfires, why can't the agency let them happen naturally? Wouldn't the agency be adding onto the cumulative effects by igniting fires?[comment end]

Contrary to the way tree death is framed in the existing condition (i.e., undesirable and a departure from natural conditions), tree death is a normal, ecological process—dead trees serve ecological functions in the forest (Please read Franklin et al. 1987. Tree Death as an Ecological Process. *BioScience* 37(8): 550-56), which the Forest Service ignores with the implication that dead trees are create undesirable conditions. Franklin et al. 1987 recognizes that:

The function of dead trees in the ecosystem has rarely received the consideration that it deserves. At the time a tree dies, it has only partially fulfilled its potential ecological function. In its dead form, a tree continues to play numerous roles as it influences surrounding organisms. Of course, the impact of the individual tree gradually fades as it is decomposed and its resources dispersed, but the woody structure may remain for centuries and influence habitat conditions for millenia.

Franklin et al. 1987 p. 550. For example, tree death does the following:

- Increases light, nutrients, water, and energy available to other organisms
- Attracts decomposer organisms, which bring with them nutrient resources
- Creates woody debris on the forest floor that serve as erosion barriers on steeper hillsides or stepped stream profiles in forest streams
- The uprooting of trees mixes soils

Franklin et al. 1987. All forests have insects and disease. [comment:10-15(230.03 Forest Health )]What we've never seen for this forest is any scientific support as to levels of insect activity and disease that have occurred over the past century. Wouldn't you need these kind of levels to support assertions that insect activity or diseases are at unhealthy levels?[comment end]

[comment:10-16(236 Fire, Fire Risk)]Also, the Forest Service has provided absolutely no support that dead fuel—trees killed by the hemlock looper—contributes to the high-severity wildfires. The PA leads the reader to believe only dead and dying trees will be targeted and those are the ones that contribute to fire severity. There is considerable research about how beetle-killed trees, for example, do not contribute to high-severity fires (Hart et al. 2015. *Area burned in the western United States is unaffected by recent mountain pine beetle outbreaks*, Proceedings of the National Academy of Sciences. Vol. 112 (14): 4375-4380. Harvey et al. 2014. *Recent mountain pine beetle outbreaks, wildfire severity, and postfire tree regeneration in the US Northern Rockies*. Proceedings of the National Academy of Sciences. Vol. 111: 15120-15125. ). We would like to know the science you are relying upon, because this is an overly simplistic and false narrative; the best available science that we have reviewed supports no such assertion[comment end]. In fact, fires occur with mixed severity. Fires burn in a mosaic—areas within the same fire can have low burn rates to areas of high-severity fire ( Odion et al. 2004. Patterns of Fire Severity and Forest Conditions in the Western Klamath Mountains, California. *Conservation Biology* 18 (4):927-936; Odion et al. 2014. Examining Historical and Current Mixed-Severity Fire Regimes in Ponderosa Pine and Mixed-Conifer Forests of Western North America. *PLoS One* 9(2): pp. 1-14.). The fire mosaic may even miss burning some places, which become refugia that play their own role in post-fire ecosystems (Meddens et al. 2018. Fire Refugia: What Are They, and Why Do They Matter for Global Change? *BioScience* 68: 944-954; Krawchuk et al. 2016. Topographic and fire weather controls of fire refugia in forested ecosystems of northwestern North America. *Ecosphere* 7(12): pp. 1-18, Article e01632). In fact, [comment:10-17(236 Fire, Fire Risk)]science has debunked the view that older, unmanaged forests are at risk of higher severity wildfire and there is support for the opposite—more severe fires occur in areas the vegetation has been managed (Odion et al. 2004; Bradley et al. 2016.

Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States? *Ecosphere* 7(10); pp. 1-13, Article e01492; Zald and Dunn 2018. Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape. *Ecological Applications* 28(4): 1068-1080.). The way the Forest Service has framed the existing condition as needing logging and agency-ignited fire is incorrect. For this reason, the purpose and need make no sense compared to the existing condition. The disturbance that will impair it is not fire—it is logging and mechanical work, with the roads.[comment end]

[comment:10-18(236 Fire, Fire Risk)]The PA is very misleading regarding the recent fires. It states, "Without further management to break up continuity and to create some age class diversity, there is an increased potential in both size and severity of wildfires. As witnessed during the summer of 2015 with the Wash Fire, which burned 36,853 acres around the Green Horse project area on the north and east flanks." PA at 14. The Forest Service's own BAER report (BAER report for Wash Fire.) for the Wash Fire shows 21,934 acres of the burn area as low severity (The numbers in the PA (36,853 burned acres), the reported number in the BAER report (36,555 acres), and the cumulative number of low, medium and high severity burns in the BAER Report (34,322 acres, leading one assume over 2,000 acres were not burned) are slightly different, though close.). The fact that 60% of the fire burned in low severity is inconsistent with what the PA alleges. A satellite image of the area also shows a mosaic.[comment end]

[comment:10-19(236 Fire, Fire Risk)]In any case, high-severity wildfire does not eliminate all biomass, and in fact it creates biodiversity ( Hanson 2010. *The Myth of "Catastrophic Wildfire": A new ecological paradigm of forest health.* John Muir Project Technical Report.). By skipping the "fire" part of the ecological process, which includes high severity fire, which is what the agency would do by implementing the treatments proposed, the agency is likely to impact species that rely on this ecological phenomenon, eliminate possible areas of refugia (see science on refugia referenced above), and will impact management-indicator species and sensitive species. For fire-related impacts to the species, please review the following:

Hutto 2008, *The Ecological Importance of Severe Wildfires: Some Like it Hot.* *Ecological Applications* 18(8): 1827-1834;

Noss et al. 2006. *Managing fire-prone forests in the western United States.* *Front. Ecol. Environ.* 4(9): 481-487.

If the Forest Service skips over this part of the ecological cycle by logging, future snags and habitat for species like the black-backed woodpecker will be eliminated. Because there have been so many "fuel reduction" projects that skip the fire part of the fire cycle, there is minimally a potential to be an impact. [comment end]

[comment:10-20(102.01 Beyond Scope)]The area is part of the Horse Creek experimental watershed. How might this affect the suitability of that area for study, especially since the control watershed might be affected by the logging?[comment end]

## ROADLESS AREAS

[comment:10-21(220 Laws, Policies, Courts)]Court cases point to the necessity to do EISs that analyze the impacts to roadless area development. In *National Audubon Society v. Lyons*, 46 F.3d 1437 (9th Cir. 1993) the court ruled:

The Audubon Society alleges the Forest Service completely ignored the roadless nature of the timber sales when it prepared the environmental assessments. In its defense, the Forest Service repeats its argument that, under the OWA, it was not required to consider the roadless nature of the four timber sales. We again reject this argument, and we agree with the [auto-markup:Threats]district court[auto-markup end] that the decision to harvest timber on a previously undeveloped tract of land is "an irreversible and irretrievable decision" which could have "serious environmental consequences." See *California v. Block*, 690 F.2d 753, 763 (9th Cir. 1982). *National Audubon* at 1448. Here the Ninth Circuit reaffirms that logging in roadless areas is irreversible and irretrievable. Time and time again, the courts and agency policy have decreed that roadless area logging is a major federal action requiring analysis of the impact on logging of the area's roadless values through EIS. *California v. Block*, *Smith v USFS*, *National Audubon v. Lyons*, *Tenakee Spring v. Block*, and *ICL v. Mumma* are only some of the decisions

that reach this conclusion. In this case, an EA rather than an EIS is proposed.

The PA at states, "Effects to roadless characteristics and wilderness attributes per the Idaho Roadless Rule and Forest Service Handbook (FSH) 1909.12 (72.1) will be documented for the up-coming environmental assessment." Aside from the fact the Handbook reference is to the forest planning process, the point is the agency recognizes the need to document the impacts to roadless areas in a NEPA document. Given the overall size of the project and uncertain nature of roadless impacts (burning and logging), an EIS is the appropriate documentation.[comment end]

[comment:10-22(220 Laws, Policies, Courts)]If an EA is prepared, will the public be allowed to comment on the analysis of impacts? If not, we reserve the right to raise those issues in an objection. [comment end][comment:10-23(220 Laws, Policies, Courts)]We also note that this proposal is not consistent with the existing Forest Plan. The Forest Plan FIS states on page I-17 (and elsewhere), "no road construction or timber harvesting activities will be implemented during the Plan period in the portion of the West Meadow Creek roadless area that is within the Meadow Creek drainage." Yet, logging is proposed for 90 acres in the roadless area and we are still in the 1987 plan period.[comment end]

[comment:10-24(220 Laws, Policies, Courts)]Lastly, the proposal excludes any larger roadless expanse, including land at the head of Lick Creek. In *Kettle Range Conservation Group v. USFS*, 971 F. Supp 480 (D. Or, 1997) the court again held logging in roadless areas, **including ones that are uninventoried**, is an "irretrievable commitment of resources." It is what is on the ground that counts. The agency needs to determine whether the proposed logging, such as at the head of Lick Creek in units 17A and B is within the larger roadless expanse.[comment end]

We've included our roadless report and the letter we have sent to Region 1 documenting our monitoring of a roadless area you logged in 2017 because it highlights the problems with assumptions that logging will not impact roadless or wilderness areas. As of our latest knowledge late in 2019, the temporary road was still in place, and the Forest Service has not disclosed to us when, exactly, it will be decommissioned.

## TIMBER

[comment:10-25(122.01 Cumulative Effects Analysis)]Please disclose the current standing volume under contract in the nearby areas and any in the project area, if it exists. We understand standing volume under contract to mean what you have sold but have not yet cut. This will impact a cumulative-effects analysis[comment end].

## WATERSHEDS, SOILS, AND FISHERIES

The PA gives little information on water quality as per Forest Plan requirements (including Appendix A). "Baseline conditions have not yet been assessed; however based on nearby projects, they are expected to be well within Forest Plan objectives prior to the project." PA at 21. That is patently false as O'Hara Creek was below Forest Plan objectives as shown by the Johnson Bar FSEIS on page 84. [comment:10-26(132 Water, Watershed Mgmt, 151 Roads Management)]Extensive roads will be reconstructed and new roads will be built, supposedly temporary. Although the road built in a roadless area for the Orogrande timber sale was supposed to have been temporary, so far, to our knowledge, it has not been decommissioned. See FOC letter (Nov. 1 2019) to Regional Forester and Nez Perce-Clearwater Forest Supervisor Re: temporary roads and roadless areas. We are concerned that these so-called temporary roads will be on the landscape for a considerable amount of time causing watershed and soils damage the agency has not considered. Thus, we question the assumption made in the PA.[comment end]

[comment:10-27(132 Water, Watershed Mgmt)]The 1998 Biological Opinion (BiOp) from NMFS (NOAA Fisheries) was done for listed species as part of consultation on Forest Plans. The BiOp came up with **explicit** direction to protect steelhead habitat in the Selway drainage, which contains a population unaffected by hatchery fish. The Forest Service alleges it will meet the intent of this BiOp, even though the agency proposes to violate it. PA at 27 and 28. That is unacceptable. We anticipate an EA that will discuss existing conditions for the streams at issue.[comment end]

[comment:10-28(134 Soils Mgmt)]The PA also states it will meet the Forest Plan requirement for Detrimentially Disturbed Soils. PA at 23. However, the Forest Plan requirement allows 20% DSD by the direction from the regional office only allows 15%. Thus, we question whether soils will be maintained.

[comment end]

## OLD GROWTH AND WILDLIFE

Old growth develops through complex processes. We refer you to Tepley et al. 2013, *Fire-mediated pathways of stand development in Douglas-fir/western hemlock forests of the Pacific Northwest, USA*, Ecology 94(8): 1729-43, for more reading on this (Studies from the Cascades are relevant because of the comparative phylogeography of that region with the Nez Perce-Clearwater NF. See Brunnsfeld, S. J., Sullivan, J., Soltis, D. E. & Soltis, P. S. 2001 Comparative phylogeography of northwestern North America: a synthesis. In Integrating ecology and evolution in a spatial context. BES symposium vol. (ed. . Silvertown & J.Antonovics), pp. 319-339. Oxford: Blackwells.).

[comment:10-29(142 Timber Mgmt)]Are the acres of logging going to affect any old growth? The PA suggests the proposal won't log in "verified or replacement old growth stands" (PA at 12, see also PA at 5), but unit 17B appears to be in MA 20 according to the forest plan map. The issue is further muddled on page 14 with the statement the proposal "is not expected" to diminish old growth. The issue is whether any old growth would be logged or affected by the proposal, not just verified or replacement old growth.

Showing compliance with the forest plan would be to provide the public a list of the timber stands the agency considers old growth, and a topographic map that identifies the old growth overlaid with the logging units identified. Further, the agency must show how it intends to comply with Appendix N of the Forest Plan. Additionally, if there is more than five percent of old growth in this drainage, the Forest Service has to rank that old growth to ensure that the best old growth is not logged.[comment end]

The agency has undoubtedly increased timber sales. On October 23, 2019, on Facebook, it posted the following: \*\*See page 10 of the comment letter\*\*

(Also see chart that appears further in this comment.) [comment:10-30(142 Timber Mgmt)]Despite doubling timber production since 2010, the Forest Service is using Bush et al. 2010 Forest Inventory and Analysis for a starting point on old growth. Since 2010 and that analysis, however, some of this increased timber production has come from old growth forests on the Nez Perce National Forest, and the Forest Service has also found the 2010 figures to contain areas that don't meet forest-plan old growth standards. This renders the 2010 starting point stale data, as supported by the following projects that post-date Bush et al.:

**Center Johnson:** Approved logging in forest plan old growth (final EA p. 46).

**Dutch Oven Vegetation Management Project:** Also used the Bush et al. 2010 analysis to identify old growth, but upon field visits to only some of what Bush et al. 2010 identified, the Forest Service found on-the-ground that the area did not in fact have old-growth characteristics, and even that one unit had been harvested. (Final EA May 2017 pdf p.168).

**Windy Shingle:** Used the Bush et al. 2010 analysis as a starting point and approved logging in areas the Forest Service identified as old growth. (Windy Shingle wildlife report, pdf pp. 7, 119). Also approved logging in an MA20 management area without a forest-plan amendment.

**Iron Mountain:** Cited same 12.9% figure from 2010 (EA pdf p. 76), and likely approved logging in old growth (EA pdf p. 79 and DN-FONSI).

**End of the World:** Used the Bush et al. 2010 analysis and proposed logging in "mature or overmature trees." ( Logging in "mature or overmature trees" may very well be old growth, as indicated by the wildlife report but not directly disclosed or discussed in the EA in a manner digestible by the public.) (See USDA Forest Service 2019, Nez Perce-Clearwater National Forest End of the World Environmental Assessment and draft Finding of No Significant Impact and accompanying Wildlife Report).

**Hungry Ridge:** Proposed action to log in MA20 with a forest plan amendment, with up to 699 acres of logging old growth (FEIS Ch. 3, p. 265-66).

We don't know if these are all the projects because the Forest Service has not reviewed its impact on old growth in the Nez Perce National Forest since 2010—it keeps using the Bush et al. 2010 number of 12.9% as a starting place ( See the Hungry Ridge EIS, Chapter 3 p. 260, starting using the Bush et al. 2010 old-growth estimation of "approximately 13 percent."), even though field visits in at least one project (Dutch Oven Vegetation Management Project) demonstrated the inaccuracies with even this number. Bush et al. goes off of [auto-markup:Request for Information]FIA[auto-markup end] data, and [auto-markup:Request for Information]FIA[auto-markup end] data does not determine the size of any particular old-growth stand. Relying upon Bush et al. 2010 for the forest-wide old growth assessment is out of date and cannot reflect existing conditions. Additionally, the agency must be checking for old-growth on the ground, as the agency has found when visiting areas of assumed old growth does not always match your records (see above). Also, the Forest Service cannot add all MA20 acres to count for old growth. MA20 in the forest plan stated half of the acreage the agency thought was old growth, and the other half was supposed to be replacement old growth. The agency has recognized this in other projects, but we have seen a couple of projects now where the agency seems to be assuming all MA20 acres are old growth, which inflates the accounting and likely overestimates it.

These projects represent cumulative effects on old growth that the agency must address NEPA analysis, and why, in part, an EIS is probably necessary.

Did the Wash fire eliminate any old growth? Is the Forest Service meeting plan requirements for old growth on the Nez Perce National Forest. These are relevant questions that need to be answered.  
[comment end]

[comment:10-31(143 Wildlife/Animals Mgmt)]It is unclear that the Forest Service would comply with the Nez Forest Plan as it pertains to fisher, which is a management indicator species for this forest, as well as a regional sensitive species. Habitat would be reduced by 1,851 acres.[comment end]

From Ruggiero et al. 1994b:

(T)he fisher is unique to North America and is valued by native and nonnative people as an important member of the complex natural communities that comprise the continent's northern forests. Fishers are an important component of the diversity of organisms found in North America, and the mere knowledge of the fisher's existence in natural forest communities is valued by many Americans.

Research suggest that fishers are heavily associated with older forests throughout the year. (Aubry et al. 2013 ( Aubry et al. 2013. Meta-Analysis of Habitat Selection by Fishers at Resting Sites in the Pacific Coastal Region. *he J. of Wildlife Management* 77(5): 965-974.), Olsen et al. 2014,21 Raley et al. 2012,22 Sauder 2014, Sauder and Rachlow 2014, Weir and Corbould 2010.) The Forest Service hasn't disclosed whether the area of this PA is old growth, but because there are downed trees and downed woody debris is an old-growth characteristic, this is possible.

Most studies have found that fishers are reluctant to stray from forest cover and that they prefer more mesic forests (Olson et al. 2014, Sauder 2014, Sauder and Rachlow 2014, Weir and Corbould 2010). Both Sauder and Rachlow (2014) and Weir and Corbould (2010) predicted the influence of openings on fisher habitat occupancy based on their data. For example, Weir and Corbould predicted that a 5% increase in forest openings would decrease the likelihood of fisher occupancy by 50%. Sauder and Rachlow (2014) suggested that an "increase of open area from 5% to 10% reduces the probability of occupation by fishers by 39%. Sauder and Rachlow (2014) reported that the median amount of open area within fisher home ranges was 5.4%. This was consistent with "results from California where fisher home ranges, on average, contained <5.0% open areas" (Raley et al. 2012).

Sauder and Rachlow (2014) report the average home range size is approximately 12,200 acres and for a female fisher and approximately 24,300 acres for a male fisher. Home ranges generally do not overlap greatly for the individual sexes (21.3% for females and 15.3% for males), but male home ranges can overlap female home ranges. Preferred habitat would likely occur in upland areas and stands composed of cedar and grand fir forests (Schwartz et al. 2013).

Also Jones, (undated) recognizes:

Roads are directly correlated with trapper access, and consequently, fisher vulnerability. Even in areas

where fishers cannot be legally trapped, trapping pressure for other furbearers (i.e., marten) may contribute significantly to fisher mortality. Roads bisecting or adjacent to preferred habitats (i.e., drainage bottoms) have the greatest potential of increasing a trapper's probability of encountering fishers."

And Witmer et al., 1998 state, "The range and population levels of the fisher have declined substantially in the past century, primarily the result of trapping pressure and habitat alteration through logging (Powell and Zielinski 1994)."

Heinemeyer and Jones, 1994 stated:

Fishers are susceptible to trapping, and are frequently caught in sets for other furbearers. Additionally, populations are vulnerable to trapping, as even light pressure may cause local extinction. Western fisher populations may have lower natality and higher natural mortality rates as compared to eastern populations. Consequently, western populations may be more susceptible to over-trapping. It has been suggested that incidental captures may limit population growth in some areas.

Sauder (2014) suggests that five National Forests (Clearwater, Nez Perce, Coeur d'Alene, Kaniksu, and Kootenai) hold the key to recovery of the species in the Northern Region. [comment:10-32(143 Wildlife/Animals Mgmt)]As with most of the Sensitive wildlife, fishers receive little habitat protection emphasis in the Forest Plan. There needs to be an environmental analysis that analyzes and discloses the direct, indirect or cumulative impacts on important habitat components, such as snags, logs, foraging habitat configuration, connectivity, cover, prey species impacts, etc. The FS simply has no conservation strategy for this species.[comment end]

Ruggiero et al., 1994b discuss fisher habitat disruption by human presence:

...The fisher's reaction to humans in all of these interactions is usually one of avoidance. Even though mustelids appear to be curious by nature and in some instances fishers may associate with humans (W. Zielinski, pers. obs.), they seldom linger when they become aware of the immediate presence of a human. In this regard, fishers generally are more common where the density of humans is low and human disturbance is reduced. Although perhaps not as associated with "wilderness" as the wolverine (V. Banci, Chapter 5), the fisher is usually characterized as a species that avoids humans (Douglas and Strickland 1987; Powell 1993).

[comment:10-33(143 Wildlife/Animals Mgmt)]According to the 2002 Nez Perce National Forest Lynx Analysis Unit (LAU) map, there are two LAUs in the project area—Fivemile and Lick. As such, the PA is in error regarding lynx habitat. Some of the cutting units in Horse Creek are within prime lynx habitat as is the unit at the head of Lick Creek. Thus, we question the accuracy of the PA.[comment end]

Kosterman, 2014 found that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have reproductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inches dbh. Young regenerating forest should occur only on 10-15% of a female lynx home range, i.e. 10-15% of an LAU. This renders inadequate the Forest Plan/NRLMD assumption in that 30% of lynx habitat can be open, and that no specific amount of mature forest needs to be conserved. Kosterman, 2014 demonstrates that Forest Plan/NRLMD standards are not adequate for lynx viability and recovery.

Other recent science also undermines the adequacy of the Forest Plan/NRLMD. Holbrook, et al., 2018 "used univariate analyses and hurdle regression models to evaluate the spatio-temporal factors influencing lynx use of treatments." Their analyses "indicated ...there was a consistent cost in that lynx use was low up to ~10 years after **all silvicultural actions**." (Emphasis added.) From their conclusions:

First, we demonstrated that lynx clearly use silviculture treatments, but there is a ~10 year cost of implementing any treatment (thinning, selection cut, or regeneration cut) in terms of resource use by Canada lynx. This temporal cost is associated with lynx preferring advanced regenerating and mature structural stages (Squires et al., 2010; Holbrook et al., 2017a) and is consistent with previous work demonstrating a negative effect of precommercial thinning on snowshoe hare densities for ~10 years (Homyack et al., 2007). Second, if a treatment is implemented, Canada lynx used thinnings at a faster rate post-treatment (e.g., ~20 years posttreatment to reach 50% lynx use) than either selection or regeneration cuts (e.g., ~34-40 years post-treatment to reach 50% lynx use). Lynx appear to use

regeneration and selection cuts similarly over time suggesting the difference in vegetation impact between these treatments made little difference concerning the potential impacts to lynx (Fig. 4c). Third, Canada lynx tend to avoid silvicultural treatments when a preferred structural stage (e.g., mature, multi-storied forest or advanced regeneration) is abundant in the surrounding landscape, which highlights the importance of considering landscape-level composition as well as recovery time. For instance, in an area with low amounts of mature forest in the neighborhood, lynx use of recovering silvicultural treatments would be higher versus treatments surrounded by an abundance of mature forest (e.g., Fig. 3b). This scenario captures the importance of post-treatment recovery for Canada lynx when the landscape context is generally composed of lower quality habitat. Overall, these three items emphasize that both the spatial arrangement and composition as well as recovery time are central to balancing silvicultural actions and Canada lynx conservation.

So Holbrook et al., 2018 suggests a potential adverse, long-term impact to lynx from logging.

Natural fire has the potential to impact lynx much less so. Vanbianchi et al., 2017, who found, "Lynx used burned areas as early as 1 year postfire, which is much earlier than the 2-4 decades postfire previously thought for this predator."

Kosterman, 2014, Vanbianchi et al., 2017 and Holbrook, et al., 2018 each demonstrate that there is a potential impact that must be analyzed outside of what the forest plan requires because the Forest Plan/NRLMD direction is not probably not adequate for lynx viability and recovery.

Squires et al. (2013) noted that long-term population recovery of lynx, grizzly and other species requires maintenance of short and long-distance connectivity. Lynx linkage zones for landscape habitat connectivity are necessary to allow for movement and dispersal of lynx. Lynx avoid forest openings at small scales, however effects on connectivity from project-created or cumulative openings were not analyzed in terms of this smaller landscape scale. And connectivity between project area LAUs and adjacent LAUs was not analyzed or disclosed.

We also refer you to Schwartz et al. 2013. Because logging in older, mature forests has increased and there are less of these places left for fisher, the cumulative impacts on fisher are becoming very relevant.

[comment:10-34(143 Wildlife/Animals Mgmt)]Grizzly bears have been observed in the Nez Perce National Forest and the Fish and Wildlife Service have notified you that you should be consulting on projects. Have you done that? Such extensive roadwork and burning will impact grizzlies.[comment end]

## GRAZING

[comment:10-35(122.01 Cumulative Effects Analysis)]The PA states on page 16 that additional opportunities for transitional grazing would be available for 15 years. The project is a longer one—do you mean fifteen years from the start of the project or fifteen years from when the project is complete? Negative impacts from this use are not discussed or even contemplated. The NEPA document needs to adequately address grazing and the cumulative impacts it may have on other resources. How will this impact ungulates? Would you be creating grazing opportunities that you cannot adjust back down in 15 years because of the ranchers who come to rely on the additional grazing? How will you plan for this? [comment end]

## MONITORING

[comment:10-36(130.01 Monitoring)]There is no evidence of anything that approaches adequate monitoring of MI and TES as required by the forest plan on the relevant public webpages. How can this project comply with the Nez Perce National Forest Plan if the agency has not conducted monitoring in a decade? Please disclose the Forest Service's record of compliance with the additional monitoring requirements set forth in other projects in this ranger district or on the forest. Please disclose how you plan to correct this monitoring deficiency.

Monitoring is especially important because in the past four of five years, the Forest Service has sold more timber than the previous years dating back to 2000. Logging frequency has increased over the past five years, and there is no monitoring to inform on those impacts. FOC graphed the annual timber sold based on Forest Service reporting. \*\* see chart on page 15 of comment letter\*\* Above chart based off of R1

annual timber sale numbers for the Nez-Clear (See also R1 Timber sold annual report folder, which contains the chart and the support for the numbers used in the chart.)

When one looks at the board feet sold in 2012, there is a large difference between that and 2018 (NOTE: 2019 was identical to 2018). Only monitoring can inform these impacts. Monitoring that the Forest Service continues to neglect in violation of the Forest Plan.[comment end]

## CIMATE CHANGE

[comment:10-37(133 Air and Climate)]The PA does not address the concern about climate change. Research from Oregon Sate University shows that logging is the largest contributor to greenhouse gases in Oregon. This project will log over 1,500 acres and contribute to global warming.

The FS cannot avoid discussing the project's impacts on climate change by stating the project would have a miniscule impact on global carbon emissions. The obvious problem with that viewpoint is, once can say the same thing about every source of carbon dioxide and other greenhouse gas emission on earth, and likewise justify inaction. In their comments on the KNF's Draft EIS for the Lower Yaak, O'Brien, Sheep project, the EPA rejected that sort of analysis, basically because that cumulative effects scale dilutes project effects. See Lower Yaak, O'Brien, Sheep FEIS pp. 818-19.[comment end][comment:10-38(133 Air and Climate)]

Additionally, the Forest Service must consider that, because of warming temperatures, recovery may be different than what the agency could once expect.[comment end]

[comment:10-39(133 Air and Climate)]What kind of carbon storage value will the Forest Service lose by logging this area?[comment end]

"Compared with other terrestrial ecosystems, forests store some of the largest quantities of carbon per surface area of land." (Achat et al. 2015. Forest soil carbon is threatened by intensive biomass harvesting. Scientific Reports 5:15991 | DOI:10.1038/srep15991) Much of the carbon stored is within the soils, with a smaller part in the vegetation. *Id.* Forest management can modify soil organic carbon stocks, losing soil organic carbon when comparing conventional harvests like clearcutting or shelterwood cutting with unharvested forests. *Id.* Not only does it lose the carbon stored in the soils, but cutting trees eliminates the trees' potential to continue to sequester carbon. (Carbon sequestration is "the process of capturing and storing atmospheric carbon dioxide. It is one method of reducing the amount of carbon dioxide int he atmosphere with the goal of reducing global climate change." USGS, What is carbon sequestration?  
[https://www.usgs.gov/faqs/what-carbon-sequestration?qt-news\\_science\\_products=0#qtnews\\_science\\_products](https://www.usgs.gov/faqs/what-carbon-sequestration?qt-news_science_products=0#qtnews_science_products)) *Id.*

Logging also doesn't increase carbon storage in the US by reducing future fire emissions. Research has found high carbon losses associated with "fuel treatment" and only modest differences associated with the high-severity fire and low severity fire that fuel treatment is meant to encourage (Campbell et al. 2012. Can fuel-reduction treatments really increase forest carbon storage in the western US by reducing future fire emissions? Front Ecol Environ 2012; 10(2): 83-90, doi:10.1890/110057). And where some disturbances like insects, disease, and fire kill trees and lower carbon sequestration, timber harvest is a disturbance with a greater impact (See Harris et al. 2016. Attribution of net carbon change by disturbance type across forest lands of the conterminous United States. Carbon Balance and Management 11:24, DOI 10.1186/s13021-016-0066-5). The agency needs to recognize this. The agency must account for all carbon emissions—the whole picture (Hudiburg et al. 2019. Meeting GHG reduction targets requires accounting for all forest sector emissions. Environ. Res. Lett. 14: 095005).

Logging does not serve to increase carbon sequestration in the future. McKinley et al. 2011 states, "Because forest carbon loss contributes to increasing climate risk and because climate change may impede regeneration following disturbance, avoiding deforestation and promoting regeneration after disturbance should receive high priority as policy considerations." (McKinley et al. 2011. A synthesis of current knowledge on forests and carbon storage in the United States. Ecological Applications 21(6): 1902-1924.). One specific strategy McKinley et al. also discusses is *decreasing forest harvests*, either by interval or intensity, to increase forest carbon stocks. McKinley et al. 2011 recognizes, "Generally, harvesting forests with high biomass and planting a new forest will reduce overall carbon stocks more

than if the forest were retained, *even counting the carbon storage in harvested wood products.*" Avoiding deforestation, afforestation, and reducing harvest are the first three strategies that McKinley et al. 2011 list.

Preservation of Pacific Northwest forests is a legitimate alternative to mitigate global warming. (Law et al. 2018. Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences. Vol 115(4): 3663-3668.) "Forest preservation offers a cost-effective strategy to avoid and mitigate CO2 emissions by increasing the magnitude of terrestrial carbon sink in trees and soil, preserve biodiversity, and sustain additional ecosystem services." (Buotte et al. 2019. Carbon sequestration and biodiversity co-benefits of preserving forests in the western USA).

[comment:10-40(133 Air and Climate)]We expect a comprehensive cumulative effects analysis on this point because the Forest Service has ramped up timber sales so much in the past ten years. [comment end] (See above.)

GOPHER "CONTROL"

[comment:10-41(142 Timber Mgmt)]We would like more information on how many units within which you anticipate the need to "control" gophers. How widespread is this across the forest currently? When do you find gopher populations increase to silvicultural actions, and which actions do gophers respond to? And we need more information on the environmental impacts of using chemicals or other strategies to kill gophers to offer meaningful comments.[comment end]

[comment:10-42(220.0301 NEPA)]We look forward to the EA that you have represented through the legal notice that the public is to expect[comment end].